

**(19) World Intellectual Property  
Organization  
International Bureau**



**(43) International Publication Date**  
**1 April 2004 (01.04.2004)**

**PCT**

**(10) International Publication Number**  
**WO 2004/026304 A1**

- (51) **International Patent Classification<sup>7</sup>:** **A61K 31/435,**  
31/4985, 31/517, A61P 35/00

(21) **International Application Number:**  
PCT/GB2003/004117

(22) **International Filing Date:**  
17 September 2003 (17.09.2003)

(25) **Filing Language:** English

(26) **Publication Language:** English

(30) **Priority Data:**  
0221539.0 17 September 2002 (17.09.2002) GB

(71) **Applicant (for all designated States except US):** MEDICAL RESEARCH COUNCIL [GB/GB]; 20 Park Crescent, London W1B 1AL (GB).

(72) **Inventor; and**  
(75) **Inventor/Applicant (for US only):** THOMSON, Axel, Andreas [GB/GB]; MRC Human Reproductive Sciences Unit, University of Edinburgh Chancellor's Building, 49 Little France Crescent, Old Dalkeith Road, Edinburgh EH16 4SB (GB).

(74) **Agent:** MILES, John; Eric Potter Clarkson, Park View House, 58 The Ropewalk, Nottingham NG1 5DD (GB).

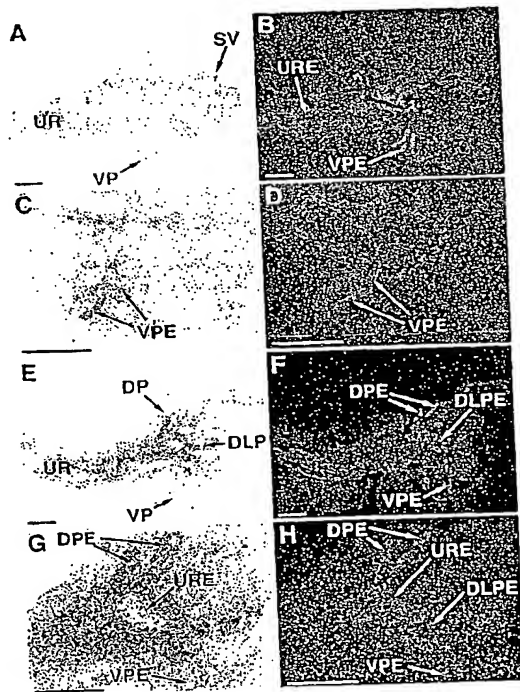
(81) **Designated States (national):** AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) **Designated States (regional):** ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),

[Continued on next page]

(54) Title: AN INHIBITOR OF THE SHH SIGNALLING PATWAY AND A TESTOSTERONE SUPPRESSING AGENT FOR THE TREATMENT OF CANCER

**(57) Abstract:** A method of protecting a patient from possible adverse effects of a treatment involving inhibition of the SHH-signalling pathway in the patient, the method comprising suppressing testosterone or its effect in the patient. A method of treating a proliferative disease such as cancer in a patient the method comprising inhibiting the SHH-signalling pathway and suppressing testosterone or its effect in the patient. Typically, the SHH-signalling pathway is inhibited using cyclopamine or a derivative thereof, and testosterone is suppressed using any one or more of a GnRH antagonist, a GnRH agonist, an androgen antagonist or a 5 $\alpha$ -reductase inhibitor.



**WO 2004/026304 A1**

**BEST AVAILABLE COPY**